Effectiveness of the 25% Contamination Level Limited Waiver Granted by the FCC For the 310 and 909 Area Codes

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Executive Summary

On August 5, 2003, the Federal Communications Commission (FCC) adopted, *FCC 03-196*[1], granting the California Public Utilities Commission's (CPUC or California) petition to raise from 10% to 25% the contamination threshold for thousand-blocks donated to number pools, but limited it to two numbering plan areas (NPAs or area codes), 310 and 909. In that order, the FCC directed the CPUC to submit to the FCC a report that evaluated the effectiveness of the limited waiver and described the outcome of the 909 NPA public hearings.[2] In response to the FCC's limited waiver, the CPUC issued an Assigned Commissioner's Ruling on August 21, 2003[3] directing carriers to donate 25% or less contaminated blocks to rate centers in the 310 and 909 NPAs, to actively monitor their inventory of telephone numbering resources, to keep records of their donations, and to submit those records to the CPUC's Telecommunications Division's Director by March 30, 2004.

The CPUC evaluated the limited waiver's effectiveness and determined whether or not the limited waiver accomplished its anticipated goals. California concluded that the limited waiver prolonged the 310 and 909 NPAs' lives and allowed for efficient allocation and utilization of scarce numbering resources. The limited waiver afforded the CPUC the opportunity to efficiently distribute and use scarce numbering resources as demonstrated by the substantial decrease in stranded telephone numbers within carriers' numbering resources inventories, the significant increase in available numbering resources, and by eliminating the need to open prefixes or NXX codes unnecessarily.

Besides analyzing the limited waiver's effects realized in the 310 and 909 NPAs, the CPUC conducted a similar analysis on the potential benefits of the limited waiver if it applied to the 714 and 818 NPAs. The CPUC found that if the waiver also applied to the 714 and 818 NPAs, it would extend these NPAs' lives longer than it did for the 310 and 909 NPAs. Applying the waiver to the 714 and 818 NPAs would also accomplish the CPUC's goals to prolong these

[1] *FCC 03-196*, CC Docket No. 99-200, Released August 11, 2003.
[2] The FCC set a due date of April 30, 2004 for the CPUC report. On February 23, 2004, the CPUC submitted a letter request to the Wireline Competition Bureau Chief, William Maher, asking for an extension of time, until June 1, 2004, to submit the report. (A copy of the letter is attached to the pleading accompanying this report.) (See Appendix 8 for the Summary of 909 NPA Public Hearings.)
[3] Proceedings R. 95-04-043 and I. 95-04-044, Adopted August 21, 2003. (A copy of the Assigned Commissioner Ruling is attached in Appendix 11.)

NPAs' lives and efficiently allocate and utilize scarce numbering resources. Therefore, as stated in the pleading accompanying this report, California urges the FCC to grant the CPUC's outstanding request for authority to increase the contamination threshold from 10% to 25% for all of California's NPAs at the CPUC's discretion.

Summary of Key Findings

- The CPUC concluded that use of the 25% contamination threshold extended the life of the 310 NPA between 10 and 16 months and extended the life of the 909 NPA between 7 and 16 months depending on the demand and supply assumptions considered.
- Carriers donated or returned 900 0-25% contaminated thousand-blocks between August 2003 and April 2004 to the 310 and 909 NPAs' number pools.
- Some carriers did not accurately report to the CPUC their donations or returns to the 310 and 909 NPAs' number pools by 131 0-25% contaminated thousand-blocks.
- The CPUC prevented 24 out of 27 NXX codes from being unnecessarily opened in the 310 and 909 NPAs between August 22, 2003 and May 14, 2004.
- By increasing the contamination threshold to 25%, the number of 0-25% contaminated thousand-blocks stranded within carriers' numbering resources inventories in the 310 and 909 NPAs between June and December 2003 decreased by 643.
- As of March 17, 2004, 161 0-25% contaminated thousand-blocks still remained stranded within carriers' numbering resources inventories in the 909 NPA that the CPUC considers as **Excess Inventories**[4] while 100 0-25% contaminated thousand-blocks remained stranded within carriers' numbering resources inventories in the 310 NPA for a combined total of 261 0-25% contaminated thousand-blocks.
- Applying the 25% contamination threshold to the 714 and 818 NPAs could potentially extend the lives of these NPAs. Depending on which demand and supply assumption is used, the life of the 714 NPA could be extended between 21 and 55 months while the life of the 818 NPA could be extended between 27 and 23 months.
- As of April 24, 2004, a maximum potential of 752 0-25% contaminated thousand-blocks, 55% of which were 10.1-25% contaminated, existed within carriers' numbering resources

[4] **Excess Inventory** equals the difference between Available numbers and **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**. (See Appendix 1 for the list of definitions)

inventories that could be donated or returned to the 714 and 818 NPAs since the CPUC considers them as Excess Inventories.

- Carriers keep excess inventories, over-forecast their future numbering needs, and unreasonably acquire thousand-blocks from the number pools.
- The 909 Public Participation Meetings demonstrated that the public preferred a split to an area code overlay and identified Alternative #1, splitting the 909 area code roughly along the San Bernardino and Riverside county line, as the preferred split plan.

Background

On September 5, 2002, the CPUC filed a petition at the FCC for a waiver of the contamination threshold rule regarding thousand-block donations to the number pool. The CPUC sought to increase the contamination threshold from ten percent to twenty-five percent at its discretion applicable to all of California's NPAs. When California petitioned the FCC to grant the CPUC a waiver of the contamination threshold rule, it intended the waiver to be a long-term proactive approach for conserving numbering resources and delaying NPA exhaust in all of California's area codes, not just those that are potentially eligible for area code relief. California neither proposed nor planned to use the waiver as a tool to facilitate immediate area code relief in the 310 and 909 NPAs. At the time of its petition, the CPUC had no plans to even implement the 909 NPA relief plan submitted to California on June 13, 2002 by the North American Numbering Plan Administration (NANPA) or the 310 NPA back-up relief plan adopted by the CPUC on September 21, 2000. In fact, almost a year went by before the FCC responded to California's petition, and the CPUC had yet to implement the 310 or 909 NPA relief plans.

The CPUC petitioned the FCC for a waiver of the contamination threshold rule to obtain flexibility in applying federal rules to ensure the efficient use of the valuable public resource of telephone numbers. Because implementing new area codes has become a "hot button" issue in California, the CPUC must ensure by state law[5] that it explores every possible, fair, and reasonable measure to efficiently allocate and utilize numbering resources before implementing any NPA relief plans. Consequently, the CPUC requests the FCC's assistance to grant California's proposed numbering resource optimization measure.

[5] California Public Utilities Code Section 7930-7943.

Goal 1 – Delaying Exhaust Of The 310 And 909 Area Codes

The CPUC analyzed the effects of the pooling contamination threshold waiver by compiling data on the supply of and demand for thousand-blocks under different assumptions, and simulating and comparing the life of the area codes under these different assumptions. The CPUC relied on a fairly straightforward exhaust model[6], which simulates the life of each area code. The exhaust model begins with the number of blocks in the number pool for each rate center and subtracts from those initial block supplies an estimate of the monthly average number of blocks assigned to carriers in each rate center. When the initial supply of blocks goes below zero in a rate center, the exhaust model adds ten blocks to that rate center, which reduces the supply of whole prefixes by one. In the month when the model's supply of whole prefixes declines to below zero, the area code is exhausted.

The study aimed to define measures of block supply and demand by rate center that would yield meaningful results of the limited waiver's effects. The study then used those measures of block supply and demand to run various scenarios through the exhaust model. Appendix 1 provides detailed definitions of the supply and demand scenarios. Tables 1.1 thru 1.6 display the study's results in terms of months-to-exhaust from August 21, 2003 and the additional NPA life that can be attributed to the limited waiver.

The CPUC ran each supply scenario against two different demand scenarios to analyze the effects of each demand scenario on the projected life of the 310 and 909 NPAs' number pools. **Demand 1** (Base Case Demand) corresponds to the base-case rate of demand: the average monthly number of thousand-blocks assigned to carriers in 2003, by rate center. **Demand 2** (CPUC Calculated Demand) denotes the average monthly rate of block assignment that the CPUC asserts would be adequate to meet carriers actual numbering needs, based on a comparison of carriers' Numbering Resource Utilization/Forecast (NRUF) Reports as of December 31, 2002 and December 31, 2003.

The first supply scenarios illustrate the basic "before and after" cases. **Supply 1** (Base Case Supply) represents the "before" case: the number of thousand-blocks available in the 310 and 909 number pools on August 21, 2003, the day the CPUC implemented the limited waiver. **Supply 2A** (Post Waiver 0-25% Blocks) represents the "after" case: the sum of **Supply 1** (Base

[6] See Appendices 4 thru 7 – Exhaust Model Inputs

Case Supply) and the number of blocks donated or returned to the 310 and 909 number pools between August 22, 2003 and March 16, 2004, according to data[7] provided by NeuStar Number Pool Administration (PA). Tables 1.1 and 1.2 display the results of scenarios **Supply 2A** (Post Waiver 0-25% Blocks) vs. **Supply 1** (Base Case Supply), using **Demand 1** (Base Case Demand) and **Demand 2** (CPUC Calculated Demand). Using **Demand 1** (Base Case Demand) as the demand forecast, the 0-25% contaminated blocks donated to the pools during the study period increased the projected life by 10 and 7 months for the 310 and 909 NPAs, respectively. Using **Demand 2** (CPUC Calculated Demand) as the demand forecast, the 0-25% contaminated blocks donated to the pools during the study period increased the projected life by 16 months each for the 310 and 909 NPAs.

Tables 1.1 and 1.2 –Months-To-Exhaust for the 310 and 909 NPAs: Supply 1 versus Supply 2A

Table 1.1

310 NPA	***Demand 1***	***Demand 2***
Supply 1	5	21
Supply 2A	15	37
Extension In Months	**10**	**16**

Table 1.2

909 NPA	***Demand 1***	***Demand 2***
Supply 1	4	9
Supply 2A	11	25
Extension In Months	**7**	**16**

Next, the CPUC compared **Supply 2B** (Post Waiver 0-10% Blocks) and **Supply 2C** (Post Waiver 0-25% Blocks), which focused on the additional blocks that carriers could not have donated without the limited waiver, based on the carriers' responses[8]. **Supply 2B** (Post Waiver 0-10% Blocks) equals the sum of **Supply 1** (Base Case Supply) and the 0-10% contaminated thousand-blocks that carriers reported that they donated or returned between August 22, 2003 and March 16, 2004. **Supply 2C** (Post Waiver 0-25% Blocks) equals the sum of **Supply 1** (Base Case Supply) and the 0-25% contaminated thousand-blocks that carriers reported that they donated or returned between August 22, 2003 and March 16, 2004. Carriers donated 172 10.1-25% contaminated thousand-blocks to the 310 and 909 NPAs' number pool during the study

[7] See Appendix 3 for the PA's data on donations and/or returns by month for the 310 and 909 NPAs.
[8] See Appendix 2 for the consolidated carrier responses by month for the 310 and 909 NPAs.

period. Tables 1.3 and 1.4 show the results of running these two supply scenarios against both **Demand 1** (Base Case Demand) and **Demand 2** (CPUC Calculated Demand). According to these scenarios, the additional donations extended the lives of both the 310 and 909 NPAs by one to three months.

Tables 1.3 and 1.4 – Months-To-Exhaust for the 310 and 909 NPAs: Supply 2B versus Supply 2C

Table 1.3

310 NPA	*Demand 1*	*Demand 2*
Supply 2B	10	33
Supply 2C	11	36
Extension In Months	**1**	**3**

Table 1.4

909 NPA	*Demand 1*	*Demand 2*
Supply 2B	9	21
Supply 2C	10	24
Extension In Months	**1**	**3**

Although contrasting **Supply 2B** (Post Waiver 0-10% Blocks) and **Supply 2C** (Post Waiver 0-25% Blocks) only extended the 310 and 909 NPAs' lives between one and three months, the extension could be larger for a couple of reasons. One reason is that some carriers did not accurately report their donations and returns to the CPUC. Comparing the PA's data and carriers' responses on the number of donations and returns between August 22, 2003 and March 16, 2004, carriers did not account for a combined total of 131 0-25% contaminated thousand-blocks, approximately equivalent to 13 prefixes, for both the 310 and 909 NPAs.[9] The CPUC did not have access to information with which to determine the contamination level of the 131 0-25% contaminated thousand-blocks. The PA also did not have data to break down the contamination levels of each donated or returned thousand-block. Moreover, the CPUC did not have access to all of the information from the Number Portability Administration Center (NPAC), which contains information on the contamination level of each activated thousand-block. Therefore, only relying on the carriers' data will not provide meaningful and complete conclusions.

A second rationale for why the extension of the 310 and 909 NPAs' lives could be larger when evaluating the **Supply 2B** (Post Waiver 0-10% Blocks) and **Supply 2C** (Post Waiver 0-

[9] See Appendices 2 and 3 to compare between the number of donations and returns reported by the carriers to the CPUC and those reported by the PA.

25% Blocks) scenarios is explained by the carriers' ability to choose which thousand-blocks to donate or return, those that are 10% or less contaminated or those that are 10.1-25% contaminated. If a rule required carriers to first donate or return the 10.1-25% contaminated thousand-blocks before those that are 10% or less contaminated then there would be more 10.1-25% contaminated thousand-blocks donated or returned than the carriers' data actually shows. Such a rule does not exist. Therefore, analyzing all of the donations and returns together is the only way to derive meaningful and complete conclusions.

Furthermore, the CPUC determined the maximum potential of the limited waiver by assuming that carriers take from the number pools only the quantity of blocks that they really need based on the **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**[10]. Comparing the results of **Supply 1** (Base Case Supply) to **Supply 3B** (CPUC Calculated 0-25% Blocks) provided further evidence as shown in Tables 1.5 and 1.6 that carriers could extend the 310 and 909 NPAs' lives. **Supply 3B** (CPUC Calculated 0-25% Blocks) represents the quantity of blocks that the CPUC asserts would be in the 310 and 909 NPAs' number pools had carriers donated all but the blocks they actually needed. The study used a comparison of carriers' NRUF Reports as of December 31, 2002 and December 31, 2003, and consideration of carriers' needs for blocks for footprint, Location Routing Number (LRN), and 9-1-1 purposes to derive **Supply 3B** (CPUC Calculated 0-25% Blocks).[11]

Using **Demand 1** (Base Case Demand) as the demand forecast, **Supply 1** (Base Case Supply) and **Supply 3B** (CPUC Calculated 0-25% Blocks) result in months-to-exhaust of 5 and 16, respectively, for the 310 NPA. Hence, that comparison yields 11 months[12] of life extension. However, using **Demand 2** (CPUC Calculated Demand) as the demand forecast, **Supply 1** (Base Case Supply) and **Supply 3B** (CPUC Calculated 0-25% Blocks) result in months-to-exhaust of 21 and 41, respectively, which gives 20 months[13] of life extension for the 310 NPA. For the 909 NPA, using **Demand 1** (Base Case Demand) as the demand forecast, **Supply 1** (Base Case Supply) and **Supply 3B** (CPUC Calculated 0-25% Blocks) result in months-to-exhaust of 4 and

[10] See Appendix 1 for the definition of **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**.
[11] The CPUC found that carriers did not use any of the 0-25% contaminated thousand-blocks within their numbering resources inventories for 9-1-1 purposes.
[12] Under **Demand 1, Supply 3B** minus **Supply 1** equals 16 minus 5 equals 11, for the 310 NPA.
[13] Under **Demand 2**, **Supply 3B** minus **Supply 1** equals 41 minus 21equals 20, for the 310 NPA.

12, respectively, which produces 8 months[14] of life extension. In contrast, using **Demand 2** (CPUC Calculated Demand) as the demand forecast, **Supply 1** (Base Case Supply) and **Supply 3B** (CPUC Calculated 0-25% Blocks) result in months-to-exhaust of 9 and 25, respectively, which generates 16 months[15] of life extension for the 909 NPA.

Tables 1.5 and 1.6 – Months-To-Exhaust for the 310 and 909 NPAs: Supply 1 with Supply 3B

Table 1.5

310 NPA	***Demand 1***	***Demand 2***
Supply 1	5	21
Supply 3B	16	41
Extension In Months	**11**	**20**

Table 1.6

909 NPA	***Demand 1***	***Demand 2***
Supply 1	4	9
Supply 3B	12	25
Extension In Months	**8**	**16**

The CPUC determined that to derive meaningful and complete conclusions, it cannot solely rely on the carriers' data regarding their donations and returns; and it must consider all 0-25% contaminated thousand-blocks donated or returned since the limited waiver took effect. Consequently, the most reliable comparisons of supply scenarios would be that of **Supply 1** (Base Case Supply) and **Supply 2A** (Post Waiver 0-25% Blocks) or **Supply 1** (Base Case Supply) and **Supply 3B** (CPUC Calculated 0-25% Blocks). Using the most reliable comparisons of supply scenarios, the CPUC ascertained that the limited waiver delayed the 310 and 909 NPAs' exhaust dates under both demand scenarios. However, the **Demand 2** (CPUC Calculated Demand) scenarios indicated that carriers could significantly extend the lives of the 310 and 909 NPAs by taking from the number pools only the quantity of blocks that their recent past growth rates suggest they need. The analysis also illustrated that, between August 21, 2003 and March 16, 2004, carriers have donated or returned 850 thousand-blocks, but 261 thousand-blocks[16] still remain stranded in carriers' numbering resources inventories that could be donated or returned. Thus, **Supply 3B** (CPUC Calculated 0-25% Blocks) showed that the 310 and 909 NPAs' lives

[14] Under **Demand 1**, **Supply 3B** minus **Supply 1** equals 12 minus 4 equals 8, for the 909 NPA.
[15] Under **Demand 2**, **Supply 3B** minus **Supply 1** equals 25 minus 9 equals 16 for the 909 NPA.
[16] Carriers retained 261 0-25% contaminated thousand-blocks in excess of the **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**.

could last longer if carriers donated or returned those thousand-blocks that are **Excess Inventories**[17] of numbering resources.

Besides using the CPUC's analysis to show that the limited waiver prolonged the 310 and 909 area codes' lives, NANPA confirmed that fact with its newest forecasts of NPA exhausts. On May 5, 2004, NANPA released the results of its most recent NPA Exhaust Analysis. It currently projects that the 310 and 909 NPAs will exhaust in the fourth and second quarter of 2004, respectively. Before the FCC granted the CPUC the limited waiver that raised the contamination threshold, NANPA projected that the 310 and 909 NPAs would both exhaust during the fourth quarter of 2003. The current NANPA forecasts extend the 310 and 909 NPA exhaust dates by four quarters and two quarters, respectively.

Goal 2 – Efficient Allocation And Utilization Of Scarce Numbering Resources

Aside from delaying the 310 and 909 NPAs' exhaust dates, the limited waiver allowed California to efficiently allocate and utilize scarce numbering resources. It achieved that goal, first, by substantially boosting the quantity of available numbering resources. Based on the PA's records, between August 2003 and April 2004, carriers donated or returned a combined total of 900 thousand-blocks to the 310 and 909 NPAs' number pools. As displayed in Table 2, the magnitude of the donations or returns between August 2003 and April 2004 is significantly higher than in similar time periods of previous years.

Table 2 – PA's Records of Donations and Returns for the 310 and 909 NPAs

Time Period	*310 NPA*	*909 NPA*	*310 and 909 NPA*
August 2001 - April 2002	4	7	11
August 2002 - April 2003	159	194	353
August 2003 - April 2004	406	494	900

Besides the limited waiver increasing the quantity of available numbering resources, it

[17] **Excess Inventory** equals the difference between Available numbers and **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**. (See Appendix 1 for the list of definitions)

greatly decreased the quantity of stranded telephone numbers within carriers' numbering resources inventories as shown in Table 3. The number of 0-25% contaminated thousand-blocks stranded diminished by a combined total of 643 thousand-blocks in the 310 and 909 NPAs when comparing the June and December 2003 NRUF Reports.[18] In contrast, the number of 0-25% contaminated thousand-blocks fell by only 7 after comparing the December 2002 and June 2003 NRUF Reports.[19] Carriers have also donated or returned 502 thousand-blocks to the 310 and 909 NPAs' number pools since December 31, 2003 while acquiring 268 thousand-blocks, thus further dwindling the number of 0-25% contaminated thousand-blocks within carriers' numbering resources inventories to 1,057 instead of 1,291.[20]

Table 3 also illustrates that the limited waiver notably reduced the total number of 10.1-25% contaminated thousand-blocks. Comparing the June and December 2003 NRUF Reports, the number of 10.1-25% contaminated thousand-blocks shrank by a combined total of 136 in the 310 and 909 NPAs. On the other hand, between the December 2002 and June 2003 NRUF Reports, the number of 10.1-25% contaminated thousand-blocks fell by only 10.[21]

A majority of the decrease in stranded thousand-blocks since the limited waiver took effect were 10% or less contaminated, which may have resulted from the carriers' ability to choose which thousand-blocks to donate or return, those that are 10% or less contaminated or those that are 10.1-25% contaminated. Another possible reason may be that carriers preferred to donate 10% or less contaminated thousand-blocks since it involved less time, effort, and cost, although there is no specific evidence that the time, effort, and cost would be significant. Nonetheless, since the limited waiver took effect, the number of 0-25% contaminated thousand-blocks stored within carriers' numbering resources inventories in the 310 and 909 NPAs dramatically decreased.

[18] 310 NPA (543 – 830) + 909 NPA (748 – 1104) = –643.
[19] 310 NPA (830 – 904) + 909 NPA (1104 – 1037) = –7.
[20] Data comes from the PA's records of donations, returns, and assignments made between January and April 2004. It is possible that the number of 0-25% contaminated thousand-blocks within carriers' numbering resources inventories could be higher or lower than 1,057 depending on the activity of those thousand-blocks that the carriers kept or recently acquired. Without the June 2004 NRUF Report, the CPUC can only rely on and make conclusions from currently available information.
[21] 310 NPA (292 – 286) + 909 NPA (335 – 351) = –10.

Table 3 – Total Number of 0-25% Contaminated Thousand-Blocks Stored within Carriers' Numbering Resources Inventories in the 310 and 909 NPAs

NPA	*Contamination Level*	*December 2002*	*June 2003*	*December 2003*
310	0-10%	618	538	322
310	10.1-25%	286	292	221
310	**0-25%**	**904**	**830**	**543**

NPA	*Contamination Level*	*December 2002*	*June 2003*	*December 2003*
909	0-10%	686	769	478
909	10.1-25%	351	335	270
909	**0-25%**	**1037**	**1104**	**748**

Not only did the limited waiver significantly lessen the quantity of stranded telephone numbers within carriers' inventories, it also provided the CPUC the opportunity to prevent prefixes or NXX codes from being unnecessarily opened. Between August 22, 2003 and May 14, 2004, California received 27 requests to open NXX codes in the 310 and 909 NPAs to replenish some of the rate centers within these area codes' number pools. As shown in Table 4, California only granted three out of those twenty-seven NXX code requests.

The CPUC, again, proactively explored ways to conserve numbering resources and delay NPA exhaust. To ensure that carriers had donated or returned the majority of the 0-25% contaminated thousand-blocks in excess of the **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate** to those rate centers needing pool replenishment, the CPUC surveyed carriers that it considered to have **Excess Inventories** for donations or returns. After the CPUC specifically requested additional donations or returns, carriers donated or returned 101 0-25% contaminated thousand-blocks, 39% of which were 10.1-25% contaminated. Without the 39 10.1-25% contaminated thousand-blocks, the CPUC would have had to open more prefixes. Those 101 0-25% contaminated thousand-blocks, specifically, afforded California the ability to prevent the unnecessary opening of 24 NXX codes and saved the 909 NPA from untimely

exhaust.

Table 4 – Pool Replenishment Requests between August 22, 2003 and May 14, 2004

NPA	*Number of Prefixes Requested*	*Number of Prefixes Opened*	*Number of Thousand-Blocks Donated or Returned after CPUC Surveyed Carriers for more Donations or Returns*		
			0-10% Contaminated Thousand-Blocks	*10.1-25% Contaminated Thousand-Blocks*	*0-25% Contaminated Thousand-Blocks*
310	1	1	1	0	1
909	26	2	61	39	100

Conclusions for Goal 2

To conclude, the limited waiver provided the CPUC another numbering resource optimization measure to efficiently distribute and use scarce numbering resources as demonstrated by the reduction in stranded telephone numbers within carriers' numbering resources inventories, the huge influx of available numbering resources, and the prevention of NXX codes from being opened unnecessarily. Although, carriers did donate or return scores of thousand-blocks, there still remain 261 thousand-blocks stranded within carriers' numbering resources inventories that the CPUC considers as **Excess Inventories**.

Factors Influencing Carriers To Keep Excess Inventories

The CPUC believes that several factors have influenced a majority of the carriers to keep excess inventories. First, there is no clear and standard definition of a carrier's six-month inventory needs. Carriers do not have a uniform formula to follow for calculating their six-month inventory needs, so they can simply state that it equates to a quantity that is double, triple, quadruple their actual growth in the past six months. Thus, the lack of a formula to determine the six-month inventory needs allows carriers to carry excess inventories.

A second factor involves the uncertainty associated with the timing of donations and returns. Some carriers believe that donations and returns are only required at the time that an

NPA enters into number pooling even though they have excess inventories after the fact. Those carriers assert that there are no FCC rules requiring them to make subsequent donations and returns. As a result, they maintain their excess inventories, strand large quantities of telephone numbers, and more importantly, contribute to NPA exhaust. On the other hand, other carriers donate and return thousand-blocks even after an NPA has entered number pooling, but they do not do so regularly. There are only a few carriers that routinely donate and return thousand-blocks in all California NPAs consistent with the spirit of the FCC's Numbering Resource Optimization Orders and the CPUC's rules. The FCC should ensure that carriers routinely donate and return thousand-blocks to the number pools.

A third factor concerns the lack of a clearly defined forecast methodology that carriers could use to calculate their future need for thousand-blocks. The CPUC has found that carriers generally over-forecast their need for thousand-blocks. Therefore, the lack of a clearly defined forecast methodology contributes to the premature exhaust of NPAs. If carriers only acquired from the number pools the thousand-blocks that they really needed based on reasonable forecasts of future numbering needs determined by their **Historical Need For Numbering Resources**[22] then thousand-blocks would be optimally allocated and utilized. As an example of a reasonable forecast methodology, the CPUC uses a 15% projected growth rate, which the FCC also applied in its directives for evaluating Safety Valve requests under *FCC 01-362*[23], for determining the number of thousand-blocks that a carrier would need in the future. The CPUC then applies the 15% projected growth rate to the carrier's **Historical Need For Numbering Resources**.

In conclusion, the three factors mentioned above have a negative effect on the number of thousand-blocks that carriers donate and return. Resolving those three factors would lead to a larger decrease in stranded telephone numbers, a bigger increase in available numbering resources, and prevention of more NXX codes from being unnecessarily opened. Therefore, if a definition of six-month inventory needs and forecast methodology and a specific time period for making donations and returns existed then the 310 and 909 NPAs would have benefited even more from the limited waiver. Based on California's experience, the CPUC recommends that the FCC establish rules defining six-month inventory needs, forecast methodology, and timing of

[22] See Appendix 1 for the definition of **Historical Need For Numbering Resources**. For the purposes of this analysis, the CPUC used the December 31, 2002 and December 31, 2003 NRUF Reports. However, for other types of analyses, different periods of NRUF Reports can be used to determine the change in Assigned and Intermediate numbers.

[23] *FCC 01-362*, CC DocketNo. 99-200, Released December 28, 2001.

donations and returns.

Potential Benefits If Waiver Applied To The 714 and 818 Area Codes

The CPUC also conducted an in-depth analysis, similar to the one it did for the 310 and 909 NPAs, on the waiver's potential effects if it applied to the 714 and 818 NPAs. Applying the 25% contamination threshold to the 714 and 818 NPAs could potentially extend the lives of these NPAs. Depending on which demand and supply assumption is used, the life of the 714 NPA could be extended between 21 and 55 months, and, the life of the 818 NPA could be extended between 23 and 27 months.

The 714 and 818 NPAs' analysis assumed that the waiver started on April 24, 2004. The CPUC applied three supply scenarios, **Supply 1*** (Base Case Supply), **Supply 3A*** (CPUC Calculated 0-10% Blocks), and **Supply 3B*** (CPUC Calculated 0-25% Blocks), and two demand scenarios, **Demand 1** (Base Case Demand) and **Demand 2** (CPUC Calculated Demand).[24] Given the three supply scenarios, the exhaust model runs them against the two demand scenarios to determine potential NPA exhaust cases. After determining the potential NPA exhaust cases, the analysis compares the results, as shown in Tables 5.1 thru 5.4 below, to calculate the extension in terms of months. To calculate the extension in terms of months, subtract the results of the supply comparison under each demand scenario.

Supply 1* (Base Case Supply), again, corresponds to the "before" case, but now equals the supply of available thousand-blocks in the 714 and 818 NPAs' number pools as of April 23, 2004. **Supply 3A*** (CPUC Calculated 0-10% Blocks) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) represent the "after" cases and indicate the maximum potential number of thousand-blocks that could be donated or returned. **Supply 3A*** (CPUC Calculated 0-10% Blocks) represents the number of thousand-blocks that the CPUC asserts would be in the 714 and 818 NPAs' number pools if carriers did not carry **Excess Inventories** of 0-10% contaminated thousand-blocks. **Supply 3B*** (CPUC Calculated 0-25% Blocks) characterizes the supply of available thousand-blocks in the 714 and 818 NPAs' number pools if carriers did not keep **Excess Inventories** of 0-25% contaminated thousand-blocks.

Again, **Demand 1** (Base Case Demand) signifies the base-case demand rate, which is the

[24] See Appendix 1 for the definitions of **Supply 1***, **Supply 3A***, **Supply 3B***, **Demand 1**, and **Demand 2**.

average monthly assignment rate of thousand-blocks in the year 2003. **Demand 2** (CPUC Calculated Demand) denotes the average monthly assignment rate that the CPUC asserts would be adequate to meet carriers' numbering needs. **Demand 2** (CPUC Calculated Demand) assumes that carriers have used all of their Available numbers in excess of their six-month inventory needs, have kept a reasonable six-month inventory of numbering resources, have calculated a reasonable forecasted need for numbering resources, and have taken thousand-blocks from the number pools only when their inventory of numbering resources did not meet their six-month inventory needs and projected growth.

Analysis on the 714 Area Code

As shown in Table 5.1, under the **Demand 1** (Base Case Demand) scenario, **Supply 1*** (Base Case Supply) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 82 and 103 months, respectively, resulting in 21 months[25] of life extension for the 714 NPA. In addition, under the **Demand 2** (CPUC Calculated Demand) scenario, **Supply 1*** (Base Case Supply) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 216 and 271 months, respectively, generating 55 months[26] of life extension for the 714 NPA.

Tables 5.1 and 5.2 – Months-To-Exhaust for the 714 NPA

Table 5.1

714 NPA	*Demand 1*	*Demand 2*
Supply 1*	82	216
Supply 3B*	103	271
Extension In Months	**21**	**55**

Table 5.2

714 NPA	*Demand 1*	*Demand 2*
Supply 3A*	92	245
Supply 3B*	103	271
Extension In Months	**11**	**26**

As shown in Table 5.2, under **Demand 1** (CPUC Calculated Demand), **Supply 3A*** (CPUC Calculated 0-10% Blocks) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 92 and 103 months, respectively, resulting in 11 months[27] of life extension for the

[25] Under **Demand 1**, **Supply 3B*** minus **Supply 1*** equals 103 minus 82 equals 21, for the 714 NPA.
[26] Under **Demand 2**, **Supply 3B*** minus **Supply 1*** equals 271 minus 216 equals 55, for the 714 NPA.
[27] Under **Demand 1**, **Supply 3B*** minus **Supply 3A*** equals 103 minus 92 equals 11, for the 714 NPA.

714 NPA. Moreover, under the **Demand 2** (CPUC Calculated Demand) scenario, **Supply 3A*** (CPUC Calculated 0-10% Blocks) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 245 and 271 months, respectively, creating 26 months[28] of life extension

Analysis on the 818 Area Code

As shown in Table 5.3, under the **Demand 1** (Base Case Demand) scenario, **Supply 1*** (Base Case Supply) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 139 and 166 months, respectively, resulting in 27 months[29] of life extension in the 818 NPA. . In addition, under the **Demand 2** (CPUC Calculated Demand) scenario, **Supply 1*** (Base Case Supply) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 143 and 166 months, respectively, resulting in 23 months[30] of life extension in the 818 NPA.

Tables 5.3 and 5.4 – Months-To-Exhaust for the 818 NPA

Table 5.3

818NPA	*Demand 1*	*Demand 2*
Supply 1*	139	143
Supply 3B*	166	166
Extension In Months	**27**	**23**

Table 5.4

818 NPA	*Demand 1*	*Demand 2*
Supply 3A*	153	155
Supply 3B*	166	166
Extension In Months	**13**	**11**

As shown in Table 5.4, under **Demand 1** (CPUC Calculated Demand), **Supply 3A*** (CPUC Calculated 0-10% Blocks) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 153 and 166 months, respectively, generating 13 months[31] of life extension for the 818 NPA. Moreover, under the **Demand 2** (CPUC Calculated Demand) scenario, **Supply 3A***

[28] Under **Demand 2**, **Supply 3B*** minus **Supply 3A*** equals 271 minus 245 equals 26, for the 714 NPA.
[29] Under **Demand 1**, **Supply 3B*** minus **Supply 1*** equals 166 minus 139 equals 27, for the 818 NPA.
[30] Under **Demand 2**, **Supply 3B*** minus **Supply 1*** equals 166 minus 143 equals 23, for the 818 NPA. Under **Demand 2**, assessing **Supply 1*** with **Supply 3B*** produced a lower extension in months compared to the results under **Demand 1** because carriers took fewer thousand-blocks than the number of blocks that the CPUC determined they needed to acquire from the 818 NPA's number pools to satisfy **the CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**.
[31] Under **Demand 1**, **Supply 3B*** minus **Supply 3A*** equals 166 minus 153 equals 13, for the 818 NPA.

(CPUC Calculated 0-10% Blocks) and **Supply 3B*** (CPUC Calculated 0-25% Blocks) produce NPA lives of 155 and 166 months, respectively, yielding 11 months[32] of life extension for the 818 NPA.

Conclusions for the 714 and 818 Analyses

Therefore, under **Demand 1** (Base Case Demand), the 714 and 818 NPAs could potentially last 21 and 27 months longer, respectively, from April 23, 2004 if carriers did not keep any excess inventory and could donate or return 0-25% contaminated thousand-blocks. In addition, under **Demand 2** (CPUC Calculated Demand), there are even larger benefits for the 714 area code since it could be extended by 55 months.

In addition to verifying that the 714 and 818 NPAs would last longer if the waiver could be applied to them, the CPUC determined that there exists a maximum potential of 752 0-25% contaminated thousand-blocks that could be donated or returned to the 714 and 818 NPAs that the CPUC considers as **Excess Inventories**. Fifty-five percent of those 752 thousand-blocks are 10.1-25% contaminated. Those 752 thousand-blocks could be donated or returned if carriers did not strand them within their numbering resources inventories, did not keep any excess inventory, and could donate or return 0-25% contaminated thousand-blocks. If carriers donated or returned those 752 0-25% contaminated thousand-blocks, then the quantity of stranded telephone numbers within carriers' numbering resources inventories would decrease and the quantity of available numbers would increase in the 714 and 818 NPAs. The increase in the quantity of available numbering resources would allow the CPUC the opportunity to prevent NXX codes from being unnecessarily opened. To conclude, applying the waiver to the 714 and 818 NPAs will delay their exhaust dates. It will also accomplish California's goal of efficient allocation and utilization of scarce numbering resources.

[32] Under **Demand 2**, **Supply 3B*** minus **Supply 3A*** equals 166 minus 155 equals 11, for the 818 NPA. Under **Demand 2**, assessing **Supply 3A*** with **Supply 3B*** produced a lower extension in months compared to the results under **Demand 1** because carriers took fewer thousand-blocks than the number of blocks that the CPUC determined they needed to acquire from the 818 NPA's number pools to satisfy **the CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**.

Appendix 1
List of Definitions

Demand 1 (Base Case Demand) is the average monthly assignment rate of thousand-blocks in the year 2003.
Equation for **Demand 1** (Base Case Demand) = Sum of thousand-blocks assigned between January and December 2003 divided by 12.

Demand 2 (CPUC Calculated Demand) is the average monthly assignment rate that should have occurred in the year 2003 if the carriers only took thousand-blocks from the pool that corresponded with their **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate** and used the quantity of Available numbers in excess of their **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate** before unnecessarily taking thousand-blocks from the number pool.

Supply 1 (Base Case Supply) is the supply of thousand-blocks available in the pool as of August 21, 2003 (for the 310 and 909 NPAs).

Supply 2A (Post Waiver 0-25% Blocks) is the sum of **Supply 1** (Base Case Supply) and the number of 0-25% contaminated thousand-blocks donated or returned between August 22, 2003 and March 16, 2004 using data provided by the PA.

Supply 2B (Post Waiver 0-10% Blocks) is the sum of **Supply 1** (Base Case Supply) and the number of 0-10% contaminated thousand-blocks donated or returned between August 22, 2003 and March 16, 2004 using data provided by the carriers.

Supply 2C (Post Waiver 0-25% Blocks) is the sum of **Supply 1** (Base Case Supply) and the number of 0-25% contaminated thousand-blocks donated or returned between August 22, 2003 and March 16, 2004 using data provided by the carriers.

Supply 3B (CPUC Calculated 0-25% Blocks) is the sum of **Supply 1** (Base Case Supply) and the difference between the **Excess Inventory** of 0-25% contaminated thousand-blocks as of December 31, 2003, the number of 0-25% contaminated thousand-blocks donated or returned according to PA's data between January 1 and March 16, 2004 (for the 310 and 909 NPAs), the number of initial thousand-blocks, the number of 0-25% thousand-blocks used for LRN purposes, and the number of 0-25% thousand-blocks used for 911 services.
Equation for **Supply 3B** = **Supply 1** + (**Excess Inventory** of 0-25% contaminated thousand-blocks as of 12/31/03 – the number of 0-25% contaminated thousand-blocks donated or returned between 01/01/04 and 03/16/04 – the number of initial thousand-blocks – the number of 0-25% contaminated thousand-blocks used for LRN purposes – the number of 0-25% contaminated thousand-blocks used for 911 services).

Supply 1* (Base Case Supply) is the supply of thousand-blocks available in the pool as of April 23, 2004 (for the 714 and 818 NPAs).

Supply 3A* (CPUC Calculated 0-10% Blocks) is the sum of **Supply 1*** (Base Case Supply) and the difference between the **Excess Inventory** of 0-10% contaminated thousand-blocks as of December 31, 2003, the number of 0-10% contaminated thousand-blocks donated or returned between January 1 and April 23, 2004 according to the PA's data (for the 714 and 818 NPAs), the number of initial thousand-blocks, and the number of 0-10% contaminated thousand-blocks used for LRN purposes.
Equation for **Supply 3A*** = **Supply 1*** + (**Excess Inventory** of 0-10% contaminated thousand-blocks as of 12/31/03 – the number of 0-10% contaminated thousand-blocks donated or returned between 01/01/04 and 04/23/04 – the number of initial thousand-blocks – the number of 0% to 10% contaminated thousand-blocks used for LRN purposes).

Supply 3B* (CPUC Calculated 0-25% Blocks) is the sum of **Supply 1*** (Base Case Supply) and the difference between the **Excess Inventory** of 0-25% contaminated thousand-blocks as of December 31, 2003, the number of 0-10% contaminated thousand-blocks donated or returned according to PA's data between January 1 and April 23, 2004 (for the 714 and 818 NPAs), the

number of initial thousand-blocks, and the number of 0-25% thousand-blocks used for LRN purposes.

Equation for **Supply 3B*** = **Supply 1** + (**Excess Inventory** of 0-25% contaminated thousand-blocks as of 12/31/03 – the number of 0-10% contaminated thousand-blocks donated or returned between 01/01/04 and 04/23/04 – the number of initial thousand-blocks – the number of 0-25% contaminated thousand-blocks used for LRN purposes).

Historical Need For Numbering Resources is the difference between the sum of Assigned and Intermediate numbers as of December 31, 2002 and December 31, 2003.

CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate is the **Historical Need For Numbering Resources** divided by 2 and then multiplied by 1.15.

Excess Inventory is the difference between Available numbers and **CPUC Calculated Six-Month Inventory Needs With A 15% Growth Rate**.

Appendix 2

Donations And Returns Reported By Carriers To The CPUC[33]

310 NPA	*08/21/03-08/31/03*	*Sept. 2003*	*Oct. 2003*	*Nov. 2003*	*Dec. 2003*	*Jan. 2004*	*Feb. 2004*	*03/01/04-03/16/04*	*Total*
0-10%Contaminated Blocks	3	0	7	9	74	52	12	34	191
10.1-25% Contaminated Blocks	1	0	22	12	31	21	22	1	110
0-25% Contaminated Blocks	4	0	29	21	105	73	34	35	301

909 NPA	*08/21/03-08/31/03*	*Sept. 2003*	*Oct. 2003*	*Nov. 2003*	*Dec. 2003*	*Jan. 2004*	*Feb. 2004*	*03/01/04-03/16/04*	*Total*
0-10%Contaminated Blocks	5	8	3	42	83	53	139	23	356
10.1-25% Contaminated Blocks	3	5	6	24	9	2	12	1	62
0-25% Contaminated Blocks	8	13	9	66	92	55	151	24	418

[33] Consolidated carrier responses to the Assigned Commissioner's Ruling issued on August 21, 2003 and the CPUC's February 11, 2004 data request.

Appendix 3

Donations And Returns Reported By NeuStar Number Pool Administration's

310 NPA	*08/21/03-08/31/03*	*Sept. 2003*	*Oct. 2003*	*Nov. 2003*	*Dec. 2003*	*Jan. 2004*	*Feb. 2004*	*03/01/04-03/16/04*	*Total*
0-25% Contaminated Blocks	79	6	36	22	56	68	82	25	374

909 NPA	*08/21/03-08/31/03*	*Sept. 2003*	*Oct. 2003*	*Nov. 2003*	*Dec. 2003*	*Jan. 2004*	*Feb. 2004*	*03/01/04-03/16/04*	*Total*
0-25% Contaminated Blocks	100	8	19	39	33	118	130	29	476

Appendix 4

Demand and Supply Values for the 310 NPA

(------- redacted material to protect carrier confidential data)

NPA	Rate Center	Demand 1 (In Blocks)	Demand 2 (In Blocks)	Supply 1 (In Blocks)	Supply 2A (In Blocks)	Supply 2B (In Blocks)	Supply 2C (In Blocks)	Supply 3B (In Blocks) (PA Data)
310	Avalon	0	-------	6	7	-------	-------	-------
310	Beverly Hills	1.75	1.08	74	101	86	102	126
310	Compton Compton	2.42	0.75	10	35	27	30	37
310	Compton Gardena	2.83	1.08	22	56	47	57	77
310	Culver City	1.67	0.83	23	34	27	37	33
310	El Segundo	1.42	0.50	45	82	70	83	92
310	Hawthorne	2.83	0.42	3	32	18	20	0
310	Inglewood	3.58	1.92	37	49	45	48	48
310	Lomita	0.75	0.25	0	5	2	2	5
310	Malibu	2.33	0.75	1	21	4	8	21
310	Redondo	5.42	0.75	13	65	29	36	72
310	San Pedro	2.33	1.00	1	15	13	15	14
310	Santa Monica MV	0.58	0.50	46	75	67	75	78
310	Santa Monica SM	1.17	1.25	43	75	63	81	85
310	Torrance	2.58	1.08	31	40	35	38	48
310	West Los Angeles	2.75	1.58	33	56	39	50	73

Appendix 5
Demand and Supply Values for the 909 NPA

(------- redacted material to protect carrier confidential data)

NPA	Rate Center	Demand 1 (In Blocks)	Demand 2 (In Blocks)	Supply 1 (In Blocks)	Supply 2A (In Blocks)	Supply 2B (In Blocks)	Supply 2C (In Blocks)	Supply 3B (In Blocks) (PA Data)
909	Arlington	0.58	0.17	50	57	52	56	70
909	Arrowhead	0.08	0.08	5	8	7	7	7
909	Banning	0.00	0.25	22	24	23	25	24
909	Big Bear City	0.00	-------	10	11	-------	-------	-------
909	Big Bear Lake	0.08	0.67	13	16	14	16	16
909	Calimesa	1.42	0.08	8	24	11	11	24
909	Chino	3.08	0.25	28	57	47	48	60
909	Claremont	3.67	0.58	28	67	47	47	80
909	Colton	1.08	0.25	28	39	38	39	41
909	Corona	1.50	0.50	61	69	71	71	83
909	Crestline	0.00	-------	2	8	-------	-------	-------
909	Diamond Bar	2.42	0.25	28	54	35	37	54
909	Elsinore	0.42	0.33	13	13	13	13	11
909	Etiwanda	1.75	0.17	0	17	17	17	17
909	Fontana	3.00	1.50	3	26	15	17	28
909	Hemet Anza	0.00	-------	2	2	-------	-------	-------
909	Hemet Hemet	0.83	0.42	18	18	18	18	17
909	Hemet HMLD	0.08	-------	9	9	-------	-------	-------
909	Hemet Sage	0.00	-------	2	2	-------	-------	-------
909	Hemet SNJC	0.00	0.17	18	19	19	21	20
909	Highland	1.00	0.75	10	20	18	18	19
909	Idyllwild	0.00	-------	13	15	-------	-------	-------
909	Lakeviewnu	0.00	-------	8	9	-------	-------	-------
909	Marshall	0.25	0.00	25	28	26	26	36
909	Mentone	0.17	0.00	22	25	23	23	24
909	Mira Loma	0.25	0.08	3	7	6	7	13
909	Moreno	0.75	0.17	6	16	15	15	16
909	Murrieta	2.42	0.92	5	9	9	9	7
909	Ontario	3.50	1.92	13	37	28	41	55
909	Perris	2.58	1.08	9	24	24	25	20
909	Pomona	3.67	1.58	21	46	47	48	57
909	Redlands	0.83	0.17	27	40	40	40	46
909	Rialto	1.00	1.00	23	32	31	32	48
909	Riverside	4.25	1.50	2	51	38	49	80
909	Running Springs	0.08	0.42	9	18	18	18	17
909	San Bernardino	4.25	1.83	9	56	63	70	74
909	Sun City	0.25	0.25	23	25	25	25	30
909	Temecula	4.08	1.58	9	21	21	27	33
909	Temescal Canyon	0.67	0.08	-1	5	4	4	0
909	Upland	3.75	0.25	19	59	42	45	62
909	Woodcrest	0.50	0.00	12	16	15	15	16

Appendix 6

Demand and Supply Values for the 714 NPA

(------- redacted material to protect carrier confidential data)

NPA	Rate Center	Demand 1 (In Blocks)	Demand 2 (In Blocks)	Supply 1* (In Blocks)	Supply 3A* (In Blocks)	Supply 3B* (In Blocks) (PA Data)
714	ANAHEIM	5.58	2.00	80	139	177
714	BREA	0.08	0.17	55	63	73
714	BUENA PARK	0.17	0.25	52	72	87
714	CAPITRNVLY	0.00	-------	0	-------	-------
714	CYPRESS	0.25	0.25	59	68	76
714	FULLERTON	0.92	0.58	64	75	90
714	GARDEN GRV	0.17	0.08	57	66	84
714	HUNTITNBCH	2.42	0.42	80	92	117
714	LAGUNA BCH	0.00	-------	0	-------	-------
714	ORANGE	1.00	0.25	72	91	114
714	PLACENTIA	0.25	0.25	61	66	76
714	SANTA ANA	3.08	1.00	71	106	156
714	SILVERADO	0.33	0.08	34	37	44
714	WESTMINSTR	0.67	0.83	23	30	35
714	YORBALINDA	0.08	0.08	65	74	80

Appendix 7

Demand and Supply Values for the 818 NPA

(------- redacted material to protect carrier confidential data)

NPA	Rate Center	Demand 1 (In Blocks)	Demand 2 (In Blocks)	Supply 1* (In Blocks)	Supply 3A* (In Blocks)	Supply 3B* (In Blocks) (PA Data)
818	AGOURA	0.25	0.17	47	47	54
818	BRBN BRBN	0.83	0.17	85	123	148
818	BRBN SNVY	0.75	0.83	28	33	41
818	CANOGAPARK	1.17	1.17	55	78	105
818	GLENDALE	0.67	0.50	100	122	137
818	LACRSCENTA	0.33	0.42	30	31	36
818	NO HOLLYWD	1.33	0.58	80	90	105
818	NORTHRIDGE	0.17	0.08	41	51	68
818	PSDN LACN	0.33	1.25	31	26	30
818	PSDN PSDN	0.00	0.00	0	0	0
818	RESEDA	1.08	0.08	38	42	47
818	SNFN GRHL	0.42	0.08	37	35	41
818	SNFN PACM	0.42	0.75	23	25	33
818	SNFN SNFN	0.67	0.75	46	46	55
818	SNFN SPLV	0.08	0.08	20	20	24
818	SUNLD TJNG	0.08	0.33	34	33	35
818	VAN NUYS	3.00	3.08	138	199	226

Appendix 8
Summary of 909 NPA Public Hearings

In *FCC 03-196*, the FCC also required the CPUC to "file a report with the Bureau by April 30, 2004 on the outcome of the public hearings."[34] The CPUC hosted two local jurisdiction meetings and five public participation meetings between July 11 and 17, 2003 as part of its public outreach efforts to gather the opinions and hear the concerns of those potentially affected by changing the 909 area code in the San Bernardino and Riverside Counties. A total of 168 people attended both types of meetings. The CPUC provided the attendees comment forms and the option of submitting them during or after the meetings. The CPUC also provided the attendees the opportunity to be speakers to voice their opinions and concerns. Of the comment forms received, 78 people indicated "yes" to the question of whether he or she wanted an area code change at this time while 25 indicated "no" and 65 did not respond to the question.

Besides determining the people's preference for an area code change, the comment forms also sought information about which of the seven alternatives of area code relief[35] they favored. Alternative #1, #2, #3, and #7 are 2-way geographic splits each running along different rate center boundaries. Alternative #4 and #5 are 3-way geographic splits dividing the 909 NPA into three geographic numbering plan areas. Alternative #6 is an all-services overlay.

Summary of Results of People's Votes on Their Preferred Form of Area Code Relief

Alternative #1 (2-Way Geographic Split)	***Alternative #2 (2-Way Geographic Split)***	***Alternative #3 (2-Way Geographic Split)***	***Alternative #4 (3-Way Geographic Split)***	***Alternative #5 (3-Way Geographic Split)***	***Alternative #6 (All Services Overlay)***	***Alternative #7 (2-Way Geographic Split)***
94	1	4	0	0	21	20

As the table above shows, an overwhelming number of comment forms identified Alternative #1 as the preferred type of area code relief with 94 votes. The table above also confirms people's concerns with implementing an all-services overlay as a form of area code

[34] *FCC 03-196*, CC Docket No. 99-200, Released August 11, 2003, ¶ 12.
[35] NANPA submitted to the CPUC the 909 NPA relief plan on June 13, 2002.

relief. A majority would prefer to have a split versus an all-services overlay with 119 total votes for some form of a split while only 21 voted for an all-services overlay. The responses contained in the comment forms and received from the speakers pointed out that all-services overlays would be confusing for everybody, especially seniors, be difficult for visitors, be cumbersome in dialing telephone numbers, and be confusing in determining long distance phone calls. The results also demonstrate the importance of maintaining communities of interest. The most popular choice for area code relief, Alternative #1, approximately separates the Riverside and San Bernardino counties.

On November 13, 2003, the CPUC issued *Decision 03-11-022*[36] approving Alternative #1 "to ensure a continued supply of numbering resources" and setting the implementation schedule for the 909 area code change plan (p.3).[37]

For the 310 area code, the CPUC issued *Decision 00-09-073*[38] adopting a back-up relief plan. On October 16, 2003, the CPUC subsequently ruled in *Decision 03-10-060*[39] not to implement this area code relief plan, but to continue to monitor the supply of available telephone numbering resources and to implement the back-up relief plan when necessary.[40]

[36] Decision 03-11-022, Proceedings R. 95-04-043 and I. 95-04-044, Adopted November 13, 2003.
[37] See Appendix 9 for the CPUC's *Decision 03-11-022*.
[38] *Decision 00-09-073*, Proceedings R. 95-04-043 and I. 95-04-044, Adopted September 21, 2000.
[39] *Decision 03-10-060*, Proceedings R. 95-04-043 and I. 95-04-044, Adopted October 16, 2003.
[40] See Appendix 10 for the CPUC's *Decision 03-10-060*.

Appendix 9

CPUC Decision 03-11-002

November 13, 2003

HTML version:

http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/31796.htm

Word version:

http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/31796.doc

PDF version:

http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/31796.PDF

Appendix 10

CPUC Decision 03-10-060

October 16, 2003

HTML version:

http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/31847.htm

Word version:

http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/31847.doc

PDF version:

http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/31847.PDF

Appendix 11

Assigned Commissioner Ruling

Issued August 21, 2003

R.95-04-043 and I.95-04-044

HTML version : http://www.cpuc.ca.gov/PUBLISHED/RULINGS/29081.htm

Word version: http://www.cpuc.ca.gov/WORD_PDF/RULINGS/29081.doc

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